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10/817,660	04/02/2004	Jonathan Qiang Li	10031315-1	3412

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER	
THOMAS, MIA M	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/817,660	LI, JONATHAN QIANG	
	Examiner	Art Unit	
	Mia M. Thomas	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to applicant's amendments and remarks received on 18 July 2007. Claims 1-26 remain in this application, all of which stand rejected and are currently pending.

2. The reply filed on 18 July 2007 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): Applicant failed to address the lack of content concerning the Information Disclosure Statement 37 CFR 1.98.

Information Disclosure Statement

Manual of Patent Examining Procedure (MPEP)

Reference: Patent Rule 1.98-Content of Information Disclosure Statement

§ 1.98 Content of information disclosure statement.

(a) Any information disclosure statement filed under § 1.97 shall include the items listed in paragraphs (a)(1), (a)(2) and (a)(3) of this section.

(1) A list of all patents, publications, applications, or other information submitte for consideration by the Office. U.S. patents and U.S. patent application publications must be listed in a section separately from citations of other documents. Each page of the list must include:

(i) The application number of the application in which the information disclosure statement is being submitted;

(ii) A column that provides a space, next to each document to be considered, for the examiner's initials; and

(iii) A heading that clearly indicates that the list is an information disclosure statement.

3. The information disclosure statement filed November 16, 2006 fails to comply with 37 CFR 1.98 because it lacks data, or information concerning Non-Patent Literature Documents on the actual form submitted herein is blank. Applicant has filed a blank Information Disclosure Statement (IDS) with nothing to initial. It has been placed in the application file, but the information referred to therein was not complete nor filled out by the applicant. The

contents of the Information Disclosure Statement, although filed properly was not referenced in the actual IDS form and Examiner has not initialed any documents of record.

- Examiner accepts the amendment as responsive to the Non-Final Office Action dated 18 April 2007 however; the same information listed in the previous Office Action has been inserted in this Office Action as well. To date, this matter remains unaddressed.

4. The previous objection to Claim 13 under 37 CFR 1.75(a) is withdrawn in light of applicant's amendment.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-12, 22 and 23 are rejected under 35 U.S.C. 102(3) as being anticipated by Loui et al. (US 7,039,239 B2).

Regarding Claims 1-12, 22 and 23, "A display 114 is electrically connected to the microprocessor-based unit 112 for displaying user-related information associated with the software, e.g., by means of a graphical user interface." at column 13,line 64. In the following description, a preferred embodiment of the present invention would ordinarily *be implemented as a software program,* although those skilled in the art will readily recognize that the equivalent of such software may also be constructed in hardware." at column 3 line 17; "If the invention is implemented as a computer program, the program may be stored in conventional computer readable storage medium, which may comprise, for example; magnetic storage media such as a magnetic disk (such as a floppy disk or a hard drive) or magnetic tape" at column 3, line 27.

Regarding Claim 1:

Loui discloses a computer readable medium including executable instructions for processing training data for a statistical classification application, said computer readable medium comprising:

code for retrieving a plurality of training data structures that each comprise data members corresponding to feature elements and a data member identifying one of a plurality of classes ("the main aim of this technique is to find a class probability map over the input image representing the probability of each pixel to have come from a given class. As the first step, several features are extracted in a feature extraction stage 12 from an input color image 10." at column 3, line 38);

code for processing each of said plurality of training data structures using probabilistic models that are a function of said feature elements to calculate a respective probability indicative of the respective training data structure belonging to its identified class (Refer to Figure 1, numeral 28);

and code for generating a scatter plot, using said plurality of training data structures, that visually indicates probabilities of said training data structures belonging to identified classes (Refer to Figures 10 (a)-(e)).

Regarding Claim 2:

Loui discloses the computer readable medium of claim 1, further comprising: code for annotating points in said scatter plot to indicate probabilities of said plurality of training data structures belonging to identified classes (It is implied that through uses of "A keyboard 116 [which] is also connected to the microprocessor based unit 112 for permitting a user to input information to the software." at column 13, line 67 that the software disclosed by Loui possesses the code for annotating points).

Regarding Claim 3:

Loui discloses the computer readable medium of claim 1, wherein said code for generating a scatter plot displays points in said scatter plot using a predetermined color to indicate training data structures having probabilities below a threshold value (Referring to Figure 1, numeral 12... "The nature of these features may vary according to their interpretational power from low level feature information such as color, texture, shapes, wavelet coefficients, etc. to higher, semantic-level feature information such as location of faces, people, structure, etc." at column 3, line 45)

Regarding Claim 4:

Loui discloses the computer readable medium of claim 1, further comprising: code for identifying regions of said scatter plot that correspond to said plurality of classes (For example, the implied code for the present invention discloses Figure 6 which "shows the changes in KL Divergence when the number of components (or Gaussians), K are increased. As K is increased from 1 to 2, sharp decrease in KLD can be noticed. After K=5, the KLD almost stabilizes indicating the non-significance of further increments in K. Hence, we have chosen 5 as the number of clusters in the original image. Intuitively, one can observe five broad categories in the input image i.e., sky, water, red wall, floor/skin and tree." at column 9, line 33).

Regarding Claim 5:

Loui discloses the computer readable medium of claim 1, further comprising: code for receiving first input from a user to select a point corresponding to a respective training data structure (Refer to Figure 1, numeral 10 and numeral 24. It is implied that the present invention as disclosed by Loui possesses a method to perform a process which holds a code to input from a user, a corresponding point to a respective training structure; "...a) extracting one or more features from an input image composed of image pixels..." at column 2, line 17; also refer to Figures 7(a-c)).

Regarding Claim 6:

Loui discloses the computer readable medium of claim 5, further comprising: code for displaying values of feature elements of said respective training data structure corresponding to said selected point (Refer to Figure 12, numeral 114; Based on the

present invention disclosed by Loui, the method of this invention performs a process which accepts a code that displays values of feature elements as exhibited throughout and at Figure 12, numeral 114).

Regarding Claim 7:

Loui discloses the computer readable medium of claim 5, further comprising: code for displaying an image file associated with an object from which feature elements were derived in response to said code for receiving first input (Refer to Figure 12, numeral 114; Based on the present invention disclosed by Loui, the method of this invention performs a process which accepts a code that displays an image file as exhibited throughout and at Figure 12, numeral 114).

Regarding Claim 8:

Loui discloses the computer readable medium of claim 5, further comprising: code for receiving second input from said user to reclassify said respective training data structure corresponding to said selected point (Refer to Figure 12, numeral 114; Based on the present invention disclosed by Loui, the method of this invention performs a process which accepts a code that receives a second input from a user to reclassify training data as exhibited throughout and at Figure 12, numeral 114).

Regarding Claim 9:

Loui discloses the computer readable medium of claim 8, further comprising: code for revising said probabilistic models in response to said code for receiving said second input, wherein said code for processing is operable to recalculate probabilities of said plurality of training data structures belonging to identified classes using said revised probabilistic models (Refer to Figure 7 (b) and (c)).

Regarding Claim 10:

Loui discloses the computer readable medium of claim 5, further comprising: code for receiving second input from said user to delete said respective training data structure corresponding to said selected point (Refer to Figure 7 (b) and (c)).

Regarding Claim 11, Loui discloses a method for processing training data for a statistical classification application ("...the invention resides in a method for classification of image regions by probabilistic merging of a class probability map and a cluster probability map." at column 2, line 14, e.g. Figure 1, numeral 24), the method comprising: accessing a plurality of training data structures wherein each training data structure includes a plurality of feature variables ("As the first step, several features are extracted in a feature extraction stage 12 from an input color image 10." at column 3, line 41; "The nature of these features may vary...such as color, texture, shapes, wavelet coefficients, etc..." at column 3, line 45) and a variable identifying one of a plurality of classes ("Most common techniques are either based on maximization of mutual information or some sort of statistical test of dependence between the classes and the features." at column 3, line 58); calculating a respective confidence value for each of said plurality of training data structures that is indicative of a probability of the respective training data structure belonging to its identified class ("...selects how many clusters there are in the image...and employs a clustering algorithm 20 to cluster the similar pixels in distinct groups..." at column 4, line 2); and generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures ("A display 114 is electronically connected to the

microprocessor-based unit 112 for displaying user-related information associated with the software, e.g., by means of a graphical user interface." at column 13, line 64).

Regarding Claim 12, Loui discloses annotating at least a subset of points in said scatter plot with said confidence values ("A keyboard 116 is also connected to the microprocessor based unit 112 for permitting a user to input information to the software." at column 13, line 67).

Regarding Claim 22, Loui discloses a system for processing training data for a statistical classification application ("Figure 12 is a perspective diagram of a computer system for implementing the present invention." at column 3, line 5, (e.g. Figure 12, numeral 110)), the system comprising: means for processing a plurality of training data structures to generate a plurality of confidence values ("The computer system 110 includes a microprocessor-based unit 112 for receiving and processing software programs and for performing other processing functions." at column13, line 61), wherein said each of said plurality of training data structures defines feature values and identifies one of a plurality of classes ("...performing supervised learning based on the extracted features to obtain a class probability map of the image pixels..." at column 2, line 21), wherein said confidence values indicate probabilities of objects having said feature values belonging to said identified classes ("The preferred technique for probabilistic classification of image regions is shown in Figure 1. The main aim of this technique is to find a class probability map over the input image representing the probability of each pixel to have come from the given class." at column 3, line 37); and means for displaying a scatter plot using said plurality of training data structures that provides visual indication of probabilities of points belonging to identified classes ("A

display 114 is electronically connected to the microprocessor-based unit 112 for displaying user-related information associated with the software, e.g., by means of a graphical user interface." at column 13, line 64).

Regarding Claim 23, Loui discloses means for annotating points in said scatter plot to indicate probabilities of said plurality of training data structure belonging to identified classes ("A keyboard 116 is also connected to the microprocessor based unit 112 for permitting a user to input information to the software." at column 13, line 67).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 13-21, 24--26 rejected under 35 U.S.C. 103(a) as being unpatentable over Loui et al in combination with Donoho (IEEE computer Graphics and Applications 1988-July, pages 51-58, hereinafter referred to as Donoho).

Regarding Claim 13:

Loui et al discloses a method for processing training data for a statistical classification application, the method comprising: accessing a plurality of training data structures wherein each training data structure includes a plurality of feature variables and a variable identifying one of a plurality of classes; calculating a respective confidence value for each of said plurality of training data structures that is indicative of a probability of the respective training data structure belonging to its identified class; and

generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose wherein said display unit from the graphical user interface uses a predetermined color to identify training data structures associated with a confidence value below a threshold value.

Donoho teaches:

wherein said display unit from the graphical user interface uses a predetermined color to identify training data structures ("Display options cover a large range...like: Background color-Display data as white points on a black background or as black ones on a white background." at page 55, paragraph 6, left column under Display Options); associated with a confidence value below a threshold value ("Other features...include the ability to inspect a spread-sheet like view of the entire data set, which the user can scroll through and edit", at page 56, paragraph 4, left column).

At the time the invention was made, it would have been obvious to ("Display options cover[ing] a large range...like: Background color-Display data as white points on a black background or as black ones on a white background." at page 55, paragraph 6, left column under Display Options); associated with a confidence value below a threshold value ("Other features...include the ability to inspect a spread-sheet like view of the entire data set, which the user can scroll through and edit", at page 56, paragraph 4, left column) as taught by Donoho to the graphical user interface [used] for a scatter plot that visually indicates confidence values for [a] plurality of training data structures

as disclosed by Loui because the display options taught by Donoho allow the user to manipulate all associated data structures as disclosed in applicant's invention.

Regarding Claim 14:

Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose wherein said threshold value is determined by receiving input from a user.

Donoho teaches wherein said threshold value is determined by receiving input from a user ("As we have seen, MacSpin allows the user to transform data by any of the operations listed in Figure 6. The user may also create linear combinations of several variables." at page 56, paragraph 7, right column under Subset Operations).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to utilize "MacSpin [which] allows the user to transform data by any of the operations listed in Figure 6. The user may also create linear combinations of several variables." at page 56, paragraph 7, right column under Subset Operations) as taught by Donoho to the graphical user interface as disclosed by Loui because the display options taught by Donoho allow the user to manipulate all associated data structures as disclosed in applicant's invention.

Regarding Claim 15:

Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose teaches wherein said graphical user interface identifies regions of said scatter plot associated with each of said plurality of classes.

Donoho teaches wherein said graphical user interface identifies regions of said scatter plot associated with each of said plurality of classes (For example, Figure 5. Animation showing changes in the performance of American cars over time: the years 1971, 1978 and 1983 are shown at page 52."Further rotation shows that the data consist of three clusters. We could also highlight "American", "European," and "Japanese" subsets in turn, and find out where they are on the display. " at page 53, paragraph 3, right column under Highlighting Subsets).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to utilize by way of example, in combination with Loui to "Animat [e] showing changes in the performance of American cars over time: the years 1971, 1978 and 1983 are shown at page 52."Further rotation shows that the data consist of three clusters. We could also highlight "American", "European," and "Japanese" subsets in turn, and find out where they are on the display. " at page 53, paragraph 3, right column under Highlighting Subsets) and further through example at Figure 5 as taught by Donoho because this example allows the user to identify regions of said scatter plot associated with each of said plurality of classes.

Regarding Claim 16: Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose receiving user input to select a point of said scatter plot.

Donoho teaches receiving user input to select a point of said scatter plot ("The program offers a broad range of data manipulation and calculation features. These allow the user to interactively transform, edit, and categorize data as patterns in the display indicate." at page 51, paragraph 2, at right column in summary section; For example, "The view in the plot window shows all the cars in an x-y plot...The points represent individual cars. By moving the cursor to a point and clicking we find its identity." at page 52, paragraph 2, right column under x-y Plots).

At the time the invention was made, it would have been obvious to utilize "The [MacSpin] program [which] offers a broad range of data manipulation and calculation features as detailed above and as taught by Donoho to the graphical user interface as taught by Loui because the user input manipulation is faster and more efficient if the graphical user interface is all inclusive and all associated data structures can be easily manipulated.

Regarding Claim 17:

Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose displaying values of feature element variables of a training data structure corresponding to said selected point.

Donoho teaches displaying values of feature element variables of a training data structure corresponding to said selected point (For example, Figure 2. Info pop-up for Datsun ZX at page 52."The "variables" window shows the variables measured for each car." at page 52, paragraph 1, left column).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use for example, @ Figure 2 [to use]" Info pop-up for Datsun ZX at page 52."The "variables" window shows the variables measured for each car." at page 52, paragraph 1, left column) as taught by Donoho to the graphical user interface as disclosed by Loui because the user input manipulation is faster and more efficient if the graphical user interface is all inclusive and all associated data structures can be easily manipulated.

Regarding Claim 18:

Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose displaying an image file associated with an object from which values of a plurality of feature variables corresponding to say selected point, were obtained.

Donoho teaches displaying an image file associated with an object from which values (For example, Figure 7. American cars, with special markers given to model years 1971 to 1983, at page 53 and Figures 2 and 6) of a plurality of feature variables corresponding to said selected point, were obtained ("The x-y plot shows the general trend of two – variables-what combinations of speed and economy are available." at page 53, paragraph 1, left column under x-y-z Plots).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use for example, @ Figure 7 to illustrate that "American cars, with special markers given to model years 1971 to 1983..." at page 53 and Figures 2 and 6 [shows]"The x-y plot shows the general trend of two –variables-what combinations of speed and economy are available." at page 53, paragraph 1, left column under x-y-z Plots) as taught by Donoho to explain the image file associated with multiple objects and feature variables because the user input manipulation is faster and more efficient if the graphical user interface is all inclusive and all associated data structures can be easily manipulated.

Regarding Claim 19: Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose deleting said training data structure corresponding to said selected point in response to further user input.

Donoho teaches deleting said training data structure corresponding to said selected point in response to further user input ("By choosing "Exclude" from the events menu, we [temporarily] remove them from the display. The rotation has helped us identify and remove outliners." at page 53, paragraph 2, left column under x-y-z Plots).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to illustrate deleting said training data structure corresponding to said selected point in response to further user input as taught by Donoho to the scatter plot as disclosed by Loui because the "Events Menu" as taught by Donoho allows the user to manipulate the data from a simple drop menu within the code used to classify the statistical application of this invention.

Regarding Claim 20: Loui et al discloses generating a graphical user interface for a scatter plot that visually indicates confidence values for said plurality of training data structures.

Loui does not specifically disclose reclassifying said training data structure corresponding to said selected point in response to further user input.

Donoho teaches reclassifying said training data structure corresponding to said selected point in response to further user input ("Animation permits us to study the effect of a

fourth variable. Suppose we are interested in how the American auto industry has changed over time. We can select the American cars, and then select "Focus" from the events menu." at page 53, paragraph 4, left column, under Highlighting Subsets).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to reclassify said training data structure corresponding to said selected point in response to further user input as taught by Donoho and add the practice of reclassification to the scatter plot application as disclosed by Loui because it would allow the user to manipulate the data from a simple drop menu within the code used to classify the statistical application of this invention.

Regarding Claim 21: Loui et al. discloses calculating a respective confidence value for each of said plurality of training data structures that is indicative of a probability of the respective training data structure belonging to its identified class.

Loui does not specifically disclose refining probabilistic models after reclassification of at least one of said plurality of training data structures by a user and repeating said calculating and displaying in response to said refining.

Donoho teaches refining probabilistic models after reclassification of at least one of said plurality of training data structures by a user ("The researcher can also transform existing variables to create new ones." at page 53, paragraph 5); and repeating said calculating and displaying in response to said refining ("Features like this make

MacSpin useful not just for displaying data but for manipulating it to get the right display." at page 53, paragraph 5, right column under Transformations).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to refine the probabilistic models after reclassification as taught by Donoho and add that practice to the scatter plot information as disclosed by Loui because the practice of reclassification to the scatter plot application as disclosed by Loui would allow the user to manipulate the data from a simple drop menu within the code used to classify the statistical application of this invention.

Regarding Claim 24:

Loui et al. discloses means for processing a plurality of training data structures to generate a plurality of confidence values.

Loui does not specifically disclose means for receiving first user input to select a point in said scatter plot.

Donoho teaches means for receiving first user input to select a point in said scatter plot ("The points represent individual cars. By moving the cursor to a point and clicking, we find its identity." at page 52, paragraph 2, right column under X-Y Plots).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to utilize [moving] the cursor to a point and clicking, we find its identity." at page 52, paragraph 2, right column under X-Y Plots) as taught by Donoho as a means for receiving a user input and add that application to the processing means of generating confidence values as disclosed by Loui because the user input will create a larger range of controlled user options.

Regarding Claim 25:

Loui et al. discloses means for processing a plurality of training data structures to generate a plurality of confidence values.

Loui does not specifically disclose means for receiving second user input to reclassify a training data structure corresponding to said selected scatter point.

Donoho teaches means for receiving second user input to reclassify a training data structure corresponding to said selected scatter point ("By rotating the plot, we get an extra dimension into the display...We stop the rotation and identify it...By pointing at their names on the list, we highlight them in the plot window. They are outliners. By choosing "Exclude" from the events menu, we [temporarily] remove them from the display." at page 53, paragraph 1 and 2, right column under X-Y-Z Plots).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to "rotat[e] the plot, we get an extra dimension into the display...We stop the rotation and identify it...By pointing at their names on the list, we highlight them in the plot window. They are outliners. By choosing "Exclude" from the events menu, we [temporarily] remove them from the display." at page 53, paragraph 1 and 2, right column under X-Y-Z Plots) as taught by Donoho to the application of processing confidence values as disclosed by Loui because the user input, successively and in numerical order will create a larger range of controlled user options.

Regarding Claim 26:

Loui et al. discloses means for processing a plurality of training data structures to generate a plurality of confidence values.

Loui does not specifically disclose means for revising probabilistic models associated with said plurality of classes wherein said means for processing reprocesses said plurality of training data structures in response to said means for revising and said means for displaying redisplays said scatter plot using revised probabilities from said means for processing.

Donoho teaches means for revising probabilistic models associated with said plurality of classes ("The researcher can also transform existing variables to create new ones." at page 53, paragraph 5, right column under Transformations), wherein said means for processing reprocesses said plurality of training data structures in response to said means for revising and said means for displaying redisplays said scatter plot using revised probabilities from said means for processing ("Features like this make MacSpin useful not just for displaying data but for manipulating it to get the right display. For example, as shown in Figures 6 and 7, "Looking at the plots with this new variable shows that the American cars got more efficient and not just smaller over this period. Variable transformations are all included in a special "Transformations" window (see Figure 6), and executed by pointing and clicking with the mouse." At page 53, paragraph 5, right column under Transformations).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to add a means for revising the probabilistic models as taught by Donoho to the means for processing training data structures to generate a plurality of confidence values as disclosed by Loui because Donoho teaches the actual program which creates a "high level of interaction between the analyst and data." at page 51,

paragraph 1, left column in the summary section. Additionally, MacSpin "... places a great deal of emphasis on completeness of display options, on quality of the user interface, and on ease of use." At page 51, right column under the summary section.

Response to Arguments

9. Each of the remarks and or arguments filed with the aforementioned response have been considered:

Summary of Remarks @ page 7: "...the Examiner generally asserts that all the limitations of these claims are taught by Loui. However, the Examiner does not specifically indicate where Loui teaches any of the elements of these claims.

Examiner's Response: The Office Action generally asserted that all the elements were indeed disclosed by Loui, however, in light of the present argument, Examiner has pointed out very specific example(s) for claims 1-12, 22 and 23 of how the reference does teach the claimed invention.

Regarding Claims 1-12, 22 and 23, "A display 114 is electrically connected to the microprocessor-based unit 112 for displaying user-related information associated with the software, e.g., by means of a graphical user interface." at column 13,line 64. In the following description, a preferred embodiment of the present invention would ordinarily *be implemented as a software program,* although those skilled in the art will readily recognize that the equivalent of such software may also be constructed in hardware." at column 3 line 17 ; "If the invention is implemented as a computer program, the program may be stored in conventional computer readable storage medium, which may

comprise, for example; magnetic storage media such as a magnetic disk (such as a floppy disk or a hard drive) or magnetic tape" at column 3, line 27.

Summary of Remarks @ page 8: "...the Examiner asserts that Loui discloses the elements of base claims 11 and 22, and Donoho teaches the additional limitations set forth in claims 13-21 and 24-26.

Examiner's Response: The first Office Action generally asserted that the base claims 11 and 22 were disclosed in the 102(b) rejection as previously stated and that the additional limitations of claims 13-21 and 24-26 were also taught by Donoho. Herein, Examiner has expressed and clearly articulated exactly where the additional limitations are taught in the Donoho reference and has provided motivation to combine each element of Claims 13-21 and 24-26 with base claims 1, 11 and 22. Examiner has thoroughly used the same discussion of each rejection based on Loui et al and Donoho to state the case(s) of obvious over the applicant's claimed invention. The nature of the combination and the motivation to combine is now very clearly laid out and proper. Specifically, the motivations to combine the two references were taken directly from the reference(s).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is 571-270-1583. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mia M Thomas
Examiner
Art Unit 2624

MMT

/Brian P. Werner/
Supervisory Patent Examiner (SPE), Art Unit 2624